

Professional and Managerial Branch
Engineering Group
Industrial Engineering Series

INDUSTRIAL ENGINEER IV

02/97 (TLW)

Summary

Under general direction, manage and independently execute technical aspects of industrial and environmental engineering programs for Public Works departments and other City organizations served.

Typical Duties

Initiate, conduct and analyze industrial engineering studies of economy of operations and services. Involves: performing strategic and long-ranged planning in cooperation with other managers; defining project parameters and data requirements; applying new and adapted work sampling and measurement techniques and procedures; making engineering calculations pertaining to facility layout, work methods, equipment and facility use studies including review of engineering designs, site plans, floor layouts, technical project specifications, flow charts, organization charts, cost analyses and other reports or records; analyzing data; identifying and assessing work, project and material inefficiencies; recommending improvements in quality and cost effectiveness of work methods, labor, facilities, equipment and material utilization; overseeing inspection and quality control testing of materials; preparing and presenting presentations to upper management on findings, recommendations, and feasibility of findings; developing and implementing technical standards and policies to enhance operational efficiency and safety.

Direct large environmental projects critical to public health and safety. Involves: ensuring compliance with federal, state and local engineering, environmental and other applicable statutes pertaining to Public Works and related services such as hazardous waste storage and movement, underground fuel storage tank installation and removal, municipal landfill liner systems and associated testing; initiating and conducting meetings with regulatory agencies, businesses or other organizations and the general public in dealing with issues affecting special city projects.

Oversee as function head industrial and environmental engineering aspects of large internal/external public works construction, equipment specification and procurement projects. Involves: reviewing plans and specification prepared by City employees and private consultants for environmental/industrial design problems and compliance to standards; preparing, assembling, issuing and affixing professional engineering seals to engineering drawings and technical specifications; ensuring section meets established deadlines within established allowed budget; conducting periodic inspections of contract projects to assure compliance with contract, engineering standards, safety practices.

Supervise assigned personnel. Involves: scheduling, assigning, instructing, guiding, checking and evaluating work; arranging for or engaging in employee training and development; enforcing personnel rules and regulations, standards of conduct, work attendance, and safe work practices; counseling, motivating and maintaining harmonious working relationships among subordinates; recommending staffing and employee status changes; interviewing applicants and recommending selection..

Perform related work as required. Involves: training and consulting with industrial operation and service supervisors and personnel in new and changed safe work practices, material handling and movement; representing the City at public meetings; coordinating project progress meetings; supervising the preparation of technical records and reports

Minimum Qualifications

Training and Experience: Graduation from an accredited college or university with a Bachelor's Degree in Industrial or Environmental Engineering or related and six (6) years professional experience in industrial or environmental engineering including two (2) years experience as a registered professional engineer; or an equivalent combination of training and experience.

Knowledge, Abilities and Skills: Comprehensive knowledge of: industrial and human factors engineering principles, theories and practices as applied to a municipal setting; project management, work methods, tools, equipment, facilities and safety practices used in public works operations and industrial services. Considerable knowledge of: underground fuel storage tank management, hazardous materials and waste regulations; asbestos management in public facilities; cost and work efficiency determination techniques; applicable City, State and Federal rules, regulations and policies affecting Public Works activities; supervisory methods and personnel procedures

Ability to: read, analyze and interpret an extensive assortment of scientific literature, technical instructions, financial reports, legal documents, and other information in mathematical, diagram or other forms dealing with numerous abstract and concrete variables; interpret applicable regulations and professional standards; prepare manuals; prepare comprehensive technical reports for publication in prescribed style and format; give speeches presenting and explaining issues and recommendations of technical nature to top management and governing boards and public and regulatory groups; define industrial and environmental engineering problems of an unprecedented nature and plan research projects which involves extensively adapting generally applicable guidelines to fit unusual or complex situations; apply advanced mathematical concepts; ascertain significance and interrelationships of facts and circumstances and evaluate alternatives in terms of impact on other major programs, situations, organizations and draw conclusions about findings to develop new methods and techniques; firmly and impartially exercise delegated supervisory authority; lead and motivate subordinates; enforce applicable ordinances and regulations tactfully, firmly and impartially; maintain effective working relationships with fellow employees, consultants, regulatory representative, other city departments, business community and the general public in order to gain concurrence to solve non-routine problems involving significant differences of opinion or controversy; express oneself clearly, concisely, and persuasively both orally and in writing; maintain records and prepare reports.

Skill in operating: personal computer and associated peripherals; computer-aided industrial engineering, word processing, spreadsheets and database software; motor vehicle through city traffic; standard drafting instruments; time and distance measuring devices.

Physical Requirements: Frequently work indoors in industrial shop settings to observe operations and outdoors at construction work sites or public works facilities to conduct inspections which involve moving about on uneven terrain and exposure to other adverse field conditions.

Special Requirements: Respond to Public Works emergencies as necessary.

Licenses and Certificates: Registration as a Professional Engineer in the United States required at time of appointment. Registration as a Professional Engineer in Texas required within one (1) year following appointment. Valid Texas Class "C" Driver's License or equivalent issued by another state by time of appointment.

Director of Personnel

Department Head